

UNIVERSITY OF WYOMING
Medical Education Programs Report
From the College of Health Sciences
1 OCTOBER 2020

[Pursuant to 2020 Session Laws, Ch. 116, General government reports (HEA94), Section 18]

To the Wyoming Legislature

Introduction

The purpose of this report is to address the 3-part request from the Wyoming Legislature, which includes the following:

(a) Not later than October 1, 2020, the University of Wyoming shall report to the legislature expenditures for medical education programs for human health services, including but not limited to funds expended for the family medicine program under W.S. 21-17-125, the "WWAMI" medical education program, and medical education programs for human health care under W.S. 21-16-201 and 21-16-202. Undergraduate medical programs, nursing programs and pharmacy program expenditures need not be reported. The report shall include expenditures for the fiscal biennium ending June 30, 2020 by program.

The expenditures for the biennium ending June 30, 2020 for the Wyoming-WWAMI medical education, University of Wyoming Family Medicine Residency, and WYDENT programs are as follows:

WWAMI Expenditures

	FY19	FY20*	Biennium Total
General Fund	(\$6,267,040.00)	(\$6,267,041.00)	(\$12,534,081.00)
Payroll	\$ 379,870.27	\$ 405,095.31	\$ 784,965.58
Payments to U Washington	\$ 5,806,531.00	\$ 5,949,848.00	\$ 11,756,379.00
Support Services	<u>\$ 7,126.75</u>	<u>\$ 5,020.32</u>	<u>\$ 12,147.07</u>
Total Expenditures	\$ 6,193,528.02	\$ 6,359,963.63	\$12,533,491.65
Tuition	(\$1,772,322.53)	(\$1,990,213.80)	(\$3,762,536.33)
Payroll	\$ 506,100.90	\$ 907,264.42	\$ 1,413,365.32
Support Services	<u>\$ 603,791.65</u>	<u>\$ 1,120,246.17</u>	<u>\$ 1,724,037.82</u>
Total Expenditures	\$ 1,109,892.55	\$ 2,027,510.59	\$ 3,137,403.14
Loan Repayment	\$ 178,592.47	\$ 517,748.08	\$ 696,340.55
Payroll	\$ 123,355.15	\$ 11,033.96	\$ 134,389.11
Support Services	<u>\$ 330,314.10</u>	<u>\$ 38,820.86</u>	<u>\$ 369,134.96</u>
Total Expenditures	\$ 453,669.25	\$ 49,854.82	\$ 503,524.07
Total Program Expenditures	\$7,757,089	\$8,437,327*	\$16,194,416

*In FY20, WY WWAMI began delivering 1.5 years vs. 1 year of curriculum in Laramie

UW Family Medicine Residency Program Expenditures

	FY19	FY20	Biennium Total
General Fund	(\$ 7,689,607.50)	(\$ 7,281,555.50)	(\$ 14,971,163.00)
Payroll	\$ 7,689,607.50	\$ 7,281,555.50	\$ 14,971,163.00

WYDENT Expenditures

	FY19	FY20	Biennium Total
General Fund	(\$2,245,209.00)	(\$2,245,209.00)	(\$4,490,418.00)
Tuition	(\$ 580,471.00)	(\$ 289,869.00)	(\$ 870,340.00)
Payments to U Neb and Creighton	\$ 2,239,363.73	\$ 2,058,284.00	\$ 4,297,647.73
Payroll	\$ --	\$ 19,614.43	\$ 19,614.43
Support Services	<u>\$ 1,490.53</u>	<u>\$ 21,254.40</u>	<u>\$ 22,744.93</u>
Total Expenditures	\$ 2,240,854.26	\$ 2,099,152.83	\$ 4,340,007.09

(b) The university shall also report estimated resources necessary to establish and maintain a medical school which would meet accreditation requirements for licensing as a physician under Wyoming's "Medical Practice Act." The university shall include any recommendations regarding the establishment of a medical school in Wyoming under the purview of the university's board of trustees as it deems would be in the best interest of providing health care services to citizens of the state.

History of WWAMI

The State of Wyoming Legislature began subsidizing medical school for Wyoming residents in 1950 as a result of Senate File No. 2 when \$18,000 was appropriated for the University of Wyoming to provide oversight. From the 1950's through 1974, students from the State of Wyoming had only one program which afforded them subsidized tuition in out-of-state medical schools – the Western Interstate Commission for Higher Education (WICHE). Medical schools in the WICHE states (see

https://en.wikipedia.org/wiki/Western_Interstate_Commission_for_Higher_Education for a listing of current WICHE states) set aside a fixed number of places for students from WICHE states that had no medical school. A 1977 report from the College of Human Medicine at the University of Wyoming indicated that “the number of positions allotted to Wyoming through 1974 averaged 12 positions”. The same report went on to note that “competition for admission was very keen and resulted in fewer applicants for the program since the odds were against even a reasonably well qualified student to be accepted”.

Recognizing the importance of offering opportunities for Wyoming residents to attend medical school to meet physician workforce needs, House Bill 1A was approved in February, 1974. This legislation allocated \$50k to investigate whether the State should build a program to train

medical students in Wyoming or develop contracts with regional medical schools and pay for Wyoming resident tuition/fees. Contracts with regional medical schools would ensure a fixed number of medical school positions for Wyoming residents each year and would require Wyoming residents signing such contracts to return to Wyoming to practice medicine. After an extensive study, a recommendation was made to the Legislature to enter into partnerships with the Creighton University School of Medicine (20 positions) and the University of Utah School of Medicine (10 positions). House Bill 236 was approved in February, 1975 which allocated just over \$1M to pay for medical contracts for Wyoming residents who met admissions requirements at these institutions. From 1975-1996, 436 Wyoming residents were trained through this contract program. Many of these graduates not only came back to Wyoming to practice but have had notable careers. To name a few, Dr. Mike Jording, Newcastle – founder of the Wyoming Medical Society student scholarship; Dr. Dave Fall, Gillette – University of Wyoming Board of Trustees; Dr. Larry Kirven, Buffalo – Former WWAMI Clinical Dean; Dr. Rob Monger, Cheyenne – WWAMI Clinical Dean. When the State of Wyoming entered the contract program, the College of Human Medicine was established at the University of Wyoming to develop a pipeline for medical school and to serve as an administrative body for the medical student contract program and the family medicine residency programs in Casper and Cheyenne. The purposeful attention to medical education in Wyoming was by all accounts greatly beneficial not only to the State but also to the University of Wyoming. The late Dr. William Pancoe, Associate Dean of Admissions for the College of Human Medicine, noted these benefits in a 1979 report:

- Continuing education has become better.
- Premedical counseling services increased and made better.
- More students are getting into medical school.
- Student health services are continually being improved.
- All student programs pertaining to preprofessional training (Biochemistry, Molecular Biology, Pharmacy, Zoology & Physiology, Psychology, Social Work and Sociology) have been enhanced.
- Residency programs (Cheyenne and Casper) have been approved and are available for our students.
- Wyoming participates in the admissions process of students going to medical school.
- Increased information flow among all segments of medical care has resulted.
- Money from private sources is now being made available in state for medical education.
- Has strengthened other University programs – whatever we are involved with.
- Has stimulated Wyoming people to new interest in medicine and in educating residents in medicine and allied professions. A sense of pride in accomplishment is spreading throughout the State – for many it's a longtime dream come true.
- Has promoted cooperation between the College of Human Medicine and Wyoming doctors.
- Has attracted physicians to Wyoming

The College of Human Medicine merged with the Pharmacy and Nursing programs in 1984 to become what is known today as the College of Health Sciences at the University of Wyoming.

While the Creighton and University of Utah contract program was successful in training excellent physicians, the return rate to the State for graduates of this program experienced a notable decline in later years. Recruiting physicians to rural locations has been a challenge for over 25 years. It's well known that a major factor in new physician choice of practice location is location of their medical school training. In an effort to bring medical education to Wyoming vs. contracting for medical education at regional medical schools, the University of Wyoming began partnering with the University of Washington School of Medicine (UWSOM) in becoming the second 'W' in WWAMI (Washington, Wyoming, Alaska, Montana, Idaho). For the past 25 years, the UWSOM has ranked in the top 3 of all U.S. medical schools in terms of primary and rural care and has consistently ranked in the top 10 of all U.S. medical Schools in terms of research. The WWAMI Medical Education program delivers the medical school curriculum associated with the UWSOM at regional campuses in the five states that comprise WWAMI. Currently, the first 1.5 years of the UWSOM medical curriculum are delivered in Laramie and Wyoming students rotated among the five WWAMI states for their clinical training. The State of Wyoming pays the entirety of tuition/fees for 20 Wyoming residents each year and in return, these graduates must practice in Wyoming for at least 3 years. Wyoming has 20 guaranteed seats each year in the UWSOM medical class and nearly 70% of these graduates return to practice in Wyoming – the highest return rate of any medical program in the WWAMI region.

It is important to note that recruiting and subsequently retaining physicians to rural locations continues to be the subject of research efforts. Five common areas are known to drive recruiting and retention of physicians in rural locations:

- Job satisfaction (i.e opportunities for professional development (ex. teaching medical students), mentoring opportunities, work-life flexibility, etc.)
- Spousal accommodation
- Individual grew up in a rural location
- Exposure to rural care in medical school and/or residency program
- Financial satisfaction

In terms of job satisfaction (teaching opportunities, professional development, and medical student mentoring), over half of all WWAMI graduates practicing in Wyoming are involved with teaching WWAMI medical students. All physicians teaching into WWAMI are eligible for clinical faculty appointments at the UWSOM, giving them medical library access that many rural clinics and hospitals cannot afford. Additionally, these teaching opportunities are considered a substantial recruiting tool by health care providers in Wyoming. By requiring that WWAMI applicants be residents of Wyoming, Wyoming WWAMI insures that graduates have spent considerable time in Wyoming before applying to medical school. The WWAMI program has a targeted admissions strategy for 15% of each WWAMI class for emphasizing intensive primary care training and nearly 70% of all Wyoming WWAMI students participate in the Rural, Underserved Opportunity Training program in which students spend significant time training Wyoming communities. In addition to the WWAMI program meeting four of the five facets of recruiting and retaining physicians to Wyoming, the WWAMI program has resurrected many of the benefits to the University of Wyoming that Dr. Pancoe attributed to the former College of Human Medicine.

Recent Years: Constant Increase in Tuition

In FY21, the total tuition and fees charged by the UWSOM for attending 2nd-4th year of medical school is \$6,105,500 for 60 students, for an average cost of \$101,758 per student per year. In FY22 the projected cost for 60 students is \$6,286,154, representing a 2.96% increase from FY21. Until FY20, General Fund appropriations for WWAMI covered 100% of the tuition and fees to the UWSOM as well as salaries for WWAMI personnel. The WWAMI program submitted exception requests each year to cover the annual tuition & fee increase (roughly 3%) from the UWSOM. Due to restricted State budgets, the General Fund appropriation has remained constant and is projected to either decline or remain constant for some time to come meaning that the State no longer subsidizes 100% of student tuition & fees to the UWSOM. Table 1 below shows the residuals in General Fund WWAMI appropriations and projected tuition & fee amounts from the UWSOM through FY26.

Table 1. UWSOM Tuition/Fees, amount of WWAMI General Fund supporting WWAMI personnel salaries, WWAMI General Fund Appropriation, Deficit in UWSOM Tuition & Fees, per annum extra tuition burden to students and biennium requests needed to offset the indicated per annum student tuition burden.

Fiscal	UWSOM Tuition/Fees	WWAMI General Fund Supported Salaries	WWAMI General Fund Appropriation	Tuition & Fee Deficit	Per Annum Extra Tuition Burden to Students	Biennium Request Needed to Sustain Program
21*	\$6,103,855	\$210,020	\$6,313,875	\$0	\$500	
22*	\$6,286,154	\$27,721	\$6,313,875	\$0	\$2,500	
23**	\$6,774,739	\$0	\$6,313,875	-\$460,864	\$7,681	\$1,124,970
24	\$6,977,981	\$0	\$6,313,875	-\$664,106	\$11,068	
25	\$7,187,320	\$0	\$6,313,875	-\$873,445	\$14,577	\$1,962,510
26	\$7,402,940	\$0	\$6,313,875	-\$1,089,065	\$18,151	

* Based upon current University of Wyoming projections, WWAMI will face a budget cut which will require students to pay an additional \$500 each in FY21 and an extra \$2500 each in FY22

** The UWSOM is proposing to add one quarter of an additional year of curriculum content beginning FY23 – a conservative estimate of cost is an extra \$300,000 in resources needed to deliver the extra content.

Note from Table 1 that beginning in FY23, there will be a nearly \$500k deficit in current General fund appropriation and the tuition & fee costs at the UWSOM. Students currently pay on average just over \$15,000 per year towards their medical school tuition and fees. Beginning in FY23, Wyoming students will be paying on average \$21,681 per annum in tuition and fees (i.e. \$15,000 + \$7,681) and in FY26, without additional General Fund appropriation or alternative revenue sources, will be paying on average \$33,151 in tuition and fees per annum.

University of Washington Dictating Curriculum

Beginning with the entering WWAMI class of 2015, the UWSOM underwent the most extensive curriculum overhaul in the 75-year history of the medical school. This curriculum change was necessitated by the Liaison Committee on Medical Education (LCME) accreditation requirements. In many ways, the curriculum change has been a success – increased Step 1 medical board exam scores; higher ratings for clinical training; and more opportunities for regional states such as Wyoming to educate students in their home states. The curriculum change required significantly more financial resources (Wyoming WWAMI budget has doubled); has necessitated a greater footprint on the University of Wyoming campus; and has required more administrative oversight (ex. coordination of Step 1 board exam preparation; coordination and delivery of objective structured clinical examinations (OSCEs); establishment and maintenance of a State advisory council; establishment of a local medical research network; and doubling the number of clinical training opportunities). To meet LCME accreditation standards, regional campuses had no choice other than to follow the UWSOM lead in this curriculum change and were left on their own to figure out how to develop required resources.

As stated in the footnote of Table 1, the UWSOM has indicated that an additional one academic quarter of curriculum content will be added to the medical school curriculum beginning in FY23. Additionally, it is proposed that the WWAMI academic calendar will begin in late July and end in the middle of June. The general consensus among the regional campuses is that the proposed changes are significantly more problematic than they are beneficial. While regional WWAMI state input is taken into consideration, decisions such as this one are made despite regional campus challenges.

Medical School Comparator Institutions

There are several states in the Mountain West region that share similar challenges regarding physician recruitment, physician retention, and effective delivery of rural health care. These states (Montana, Idaho, Alaska) would typically be considered appropriate comparators regarding the establishment of medical schools. However, like Wyoming, these states are currently part of the WWAMI consortium. The closest comparator institutions that have challenges similar to Wyoming are the University of South Dakota and the University of North Dakota. However, although geographically similar, these states are more highly populated, have several cities that are significantly larger than any city in Wyoming, and have established health care networks throughout their states.

University of South Dakota (USD)

The University of South Dakota (USD) Sanford School of Medicine is a stand-alone academic-clinical-research entity that includes interdisciplinary centers such as the Center for Brain and Behavioral Research and the Center for Disabilities. The USD School of Medicine has facilities in Vermillion and Sioux Falls. Students spend their first 2 years of medical school in Vermillion; the Sioux Falls campus houses medical school administration and clinical

departments. Partnerships with hospitals in Yankton and Rapid City make up two additional campus locations.

The USD School of Medicine lists academic/clinical departments in the following areas:

- Basic Biomedical Sciences
- Internal Medicine
- Family Medicine
- Neurosciences
- Pediatrics
- Surgery
- Obstetrics & Gynecology
- Pathology
- Psychiatry

Each year, the USD School of Medicine offers approximately 49 Residency and Fellowship slots in the following areas of expertise:

- Family Medicine (17)
- Internal Medicine (8)
- General Surgery (3)
- Pathology (2)
- Pediatrics (6)
- Psychiatry (7)
- Cardiovascular Disease Fellowship (2)
- Child & Adolescent Psychiatry Fellowship (2)
- Geriatrics Fellowship (1)
- Interventional Cardiology Fellowship (1)

Currently, the USD Sanford School of Medicine

- admits 67 medical students per class
- is led by 15 Deans, Associate Deans, and Directors
- lists over 300 academic faculty and 1000 clinical faculty who provide basic science and clinical instruction

The 2020 state appropriation for the USD School of Medicine was \$59,712,809.

University of North Dakota (UND)

The University of North Dakota (UND) School of Medicine is aligned with the UND School of Health Sciences, which includes other medical-related training programs such as Medical Laboratory Science, Physical Therapy, Occupational Therapy, Sports Medicine, Population Health, and Physician Assistant. In addition to its main campus in Grand Forks, the UND School of Medicine & Health Sciences has campus offices in Bismarck, Fargo, and Minot. Students spend their first 2 years of medical school in Grand Forks; 3rd and 4th year students are trained at all four campuses.

Currently, the UND School of Medicine

- admits 78 students each year
- lists over 400 faculty

The UND School of Medicine lists academic/clinical departments in the following areas:

- Biomedical Sciences
- Internal Medicine
- Family & Community Medicine
- Geriatrics
- Neurology
- Pediatrics
- Radiology
- Surgery
- Obstetrics & Gynecology
- Pathology
- Psychiatry & Behavioral Science

Each year, the UND School of Medicine offers approximately 20 Residency and Fellowship slots in the following areas of expertise:

- Family Medicine (6)
- Geriatric Medicine Fellowship (2)
- Internal Medicine (2)
- Orthopedic Surgery (3)
- Surgery (5)
- Psychiatry (2)

Many of the residency slots are funded through the Medicare program and are based on a cost report submitted by participating hospitals.

Facilities

In 2016, the University of North Dakota completed construction of a School of Medicine facility on its main campus at a cost of \$124 million. At the other campuses, medical school facilities are part of local hospitals and medical centers.

The most recent biennial state appropriation for the UND School of Medicine & Health Sciences was \$219 million.

A School of Medicine at the University of Wyoming

A medical school at the University of Wyoming (UWy SOM) must aspire to the following goals:

- Meet the demand for physicians in the state, particularly as it relates to rural healthcare
- Stimulate medical innovation by

- Establishing translational research that increases external funding and results in the application of basic science research to clinical research
- Enhance the Wyoming Biomedical Hub by supporting clinical research that leads to biomedical technology start-ups
- Establish a culture of interdisciplinary clinical education and research that includes university academic units such as:
 - School of Pharmacy
 - School of Nursing
 - Division of Kinesiology and Health
 - Division of Communication Disorders
 - Division of Social Work
 - Wyoming Institute for Disabilities
 - Clinical Psychology Program

UWy School of Medicine Enrollment

Currently, the Wyoming-WWAMI program accepts 20 students per class each year. It is estimated that the number of Wyoming residents who are competitive for admission to medical school each year is approximately 25-30. As a stand-alone academic entity, the UWy SOM could admit students from out of state and increase enrollment beyond 25 students per class. In order to be viable from a fiscal standpoint, and enrollment of 50 or more per class would most likely be necessary. However, enrollment size will be influenced by the current availability of personnel, campus facilities, and clinical placements in the state. Future enrollments will be dictated by the state's commitment to expanding faculty, administration, and clinical-research facilities.

UWy School of Medicine Departments/Programs

In order to provide comprehensive training for its students, the UWy SOM should be comprised of the following departments:

- Internal Medicine
- Family Medicine
- Pediatrics
- General Surgery
- Obstetrics & Gynecology
- Pathology
- Psychiatry & Behavioral Science

Other specialty areas such as Geriatrics, Neurology, and Radiology could be considered, as well.

The UW currently offers programs in Biomedical Sciences and Neuroscience in Laramie. Certainly, these programs would establish research collaborations with a UWy SOM, as would other departments such as Molecular Biology and Animal Science.

UWy School of Medicine Facilities

Main Campus: The establishment of a University of Wyoming School of Medicine will require an extensive expansion of facilities. Both the University of North Dakota and the University of South Dakota have a main SOM campus plus facilities at three campuses across their respective states; the first two years of the curriculum (the “foundational” curriculum) is delivered on the main campus. It would be feasible for the UW-Laramie campus to continue to deliver the first 2 years of instruction for the UWy SOM.

In recent years, both South and North Dakota Schools of Medicine have constructed new facilities on their main campuses to house their Schools and other programs. Likewise, a UWy SOM would require a facility on its main campus to accommodate the need for expanded clinical instruction and its interdisciplinary mission. Given that the College of Health Sciences has begun discussions to propose a new facility, this would be a unique opportunity to construct a College of Health Sciences facility that would house the UWy SOM. This facility would provide opportunities for:

- Clinical training on campus
- An expanded Simulation Center
- An expanded cadaver lab to benefit the School of Medicine, School of Nursing, Communication Disorders, and Kinesiology & Health
- A Primary Care Clinic for Nursing and the School of Medicine
- A new Student Health Clinic
- The development of a Doctorate in Physical Therapy program
- Enhanced facilities for testing/vaccination programs for current and future viral outbreaks
- Development of **Centers of Healthcare Excellence**
 - Center for Neural Research and Neurological Disorders
 - Center for Mental-Behavioral Health
 - Center for Geriatrics
 - Center or Assistive Technology
 - Center for Telehealth and UW ECHO
 - Center for Rural Health
- **Interdisciplinary Clinics** to serve the state, for example:
 - This would benefit all Health Sciences units as well as the Department of Clinical Psychology
 - Partner with Ivinson Memorial Hospital and providers across the state
 - Sports Medicine
 - Parkinson’s Disease
 - Geriatrics
 - Autism
 - Developmental Disabilities
 - Mental Health
- Advanced translational research

Interdisciplinary facilities such as these would benefit the UWy School of Medicine and College of Health Sciences faculty and students alike. It would stimulate the collective thinking of its

participants, which in turn, will cultivate advances in clinical practice as well as interdisciplinary clinical and basic science research--all of which result in more competitive external funding submissions.

Clearly, a proposal for a new facility will require extensive fundraising. The potential for a new facility to expand and improve current clinical instruction, to transform basic and clinical research programs, and to provide a much-needed service to the state of Wyoming should be viewed as favorable elements that will lead to a successful capital campaign.

Branch Campuses: For the UWy SOM to be successful, a critical issue will be the availability of facilities for students who are in years three and four of the program. Like North and South Dakota, it will be necessary to establish formal partnerships with medical facilities across the state. Potential UWy SOM campus locations could include:

- Casper (Wyoming Medical Center and Summit Medical Center)
- Cheyenne (Cheyenne Regional Medical Center and Cheyenne VA Medical Center)
- Sheridan (Sheridan Memorial Hospital and Sheridan VA Medical Center)
- Rock Springs (Memorial Hospital of Sweetwater County)
- Jackson (St. John's Health)
- Evanston (Wyoming State Hospital)
- Lander/Riverton (SageWest Health Care)

Structure of the UW School of Medicine Program

Years 1 and 2: Currently, the University of Wyoming is able to meet the instructional needs of its SOM students during years 1 and 2 of medical school. These first two years involve the delivery of the “foundational” curriculum; UW faculty and clinical faculty provide instruction during this time. Expansion of enrollment would require a significant increase in instructional capacity (faculty) and facilities (such as the human cadaver laboratory).

Years 3 and 4: During the final 2 years of medical school, clinical training is more comprehensive and intensive. Consequently, there is a greater demand for clinical placement sites and clinical instruction that can offer a variety of medical specialty areas. As the programs at North and South Dakota show, third and fourth-year students receive the bulk of their training at medical sites across their respective states, and the UW would need to do the same.

The University of South Dakota lists over 1000 academic and clinical faculty who provide instruction within their SOM. A UWy SOM would require the engagement of physicians throughout the state of Wyoming to mentor its students in the primary medical specialty areas.

As with most university medical schools, it would be appropriate to place the UW Family Medicine Residency Program within the UWy School of Medicine.

Personnel and Budgetary Considerations

Although the foundation for a UWy SOM exists in the current Wyoming-WWAMI structure, administrative reorganization, operating expenses, and sources of revenue must be considered. A UWy SOM would require a significant increase in administrative personnel, research personnel, and support personnel. Recruitment of additional personnel would be required for each of the following categories:

Faculty & Staff Requirements:

- Dean's Office (Dean of SOM; 2 Associate Deans; Staff Support)
- Basic Science Instruction and Staff Support
- Clinical Instruction Faculty and Staff Support
- Research Administration
- Student Services
- Institutional Support

At a basic level, the following budgetary-fiscal areas must be considered:

Annual Operating Expenses

- Faculty and Staff Salaries, Wages, and Benefits
- Faculty Research Start-Up Expenses
- Sponsored Research Expenses
- Facilities and Equipment Expenses
- Capital Expenditures
- Professional Expenses
- Supplies and Other Expenses
- General Expenses

A UWy SOM would generate revenue from a variety of categories as listed below:

- Tuition and Fees
- Research Revenue
- Clinical Practice Revenue
- Fundraising and Other Income
- Support from Participating Medical Centers

expose all Health Sciences students to the interdisciplinary treatment model, draw practitioners from around the state to participate, and ultimately improve the health and wellness of Wyoming citizens.

Establishing a UW School of Medicine--Challenges

Cost: The establishment of a UWy SOM would require a major commitment of financial resources--both public and private. A UWy SOM would most likely not admit the annual numbers seen at North and South Dakota (78 and 67, respectively), nor would it offer additional residency programs other than the Family Medicine Residency Program (FMRP). Nonetheless, to be viable from a fiscal standpoint, enrollment would need to approximate 50 or more students, and it would be necessary to increase funding significantly to establish a UWy SOM.

The following table shows the current biennial state budget for Medical Education (WWAMI and the FMRP) compared to the Universities of South Dakota and North Dakota.

School	Biennium Budget	Comment
University of Wyoming (State Population: 567,025*)	\$ 30,080,676	20 Med Students per class Only 1 Residency Program
University of South Dakota (State Population: 903,027*)	\$ 119,425,618 (based on 2020 approp)	67 Med Students per class Multiple Residency Programs**
University of North Dakota (State Population: 761,723*)	\$ 219,000,000	78 Med Students per class Multiple Health Sciences Programs Multiple Residency Programs**

* <https://worldpopulationreview.com/states>

**Resident salaries supported by federal GME funds.

Even if funding for the FMRP is unchanged, a UWy SOM would require additional administrative positions, additional core faculty, and it will be necessary to appoint and compensate physicians from around the state to serve as clinical faculty. **Not including the cost of new facilities, a biennial budget for Medical Education (SOM and FMRP) would be estimated to be a minimum of \$75 million.**

As stated earlier, if a UWy School of Medicine is to be established, a new UW College of Health Sciences-School of Medicine facility will be essential. **Based on the cost of the recent facility that was built at the University of North Dakota (\$124 million), it is likely that the cost of a new UWy SOM and Health Sciences facility could approach \$200 million.** Further, any locations that are chosen to serve as UWy SOM campuses will most likely require facility expansion and/or upgrades to accommodate the presence of 20-30 students per year. The costs for adding 3-4 campuses across the state are undetermined.

Clinical Personnel: It will be imperative to call on the expertise of physicians from around the state of Wyoming to contribute to the education of the UWy SOM students. The University of South Dakota lists over 1,000 clinical faculty who provide training and mentorship to its students. These individuals are most likely qualified as both practitioners and instructors. The Wyoming Medical Society estimates that there are approximately 1,200-1,300 licensed

physicians who live and practice in the state of Wyoming. Many of these individuals may not be interested in participating in medical instruction; many may not have the skills to do so. Equally important, the breadth of expertise across practitioners may not align with the expertise required to provide rigorous clinical instruction. For instance, a single Neurologist would not be able to provide instruction for an entire class of medical students. Thus, before the State of Wyoming can commit to establishing its own medical school, it will be necessary to determine if there can be adequate instructional capacity in clinical settings across the state.

Quantity and Quality of Clinical Opportunities: There are a number of challenges for states like Wyoming that have a relatively low population. There are only 3 Wyoming cities with a population over 30,000, and only 10 cities with a population over 10,000 (<https://worldpopulationreview.com/states/cities/wyoming>). The majority of Wyoming cities/towns have populations less than 1,000. There are two consequences to these population statistics. One is the size of the hospitals across the state. Aside from the 3-4 larger cities, most of the hospitals across the state have a census of less than 50 beds; even the largest hospitals have a limited census. Thus, the ***quantity*** of clinical experiences that could be offered to 80-100 medical students will be limited.

A second consequence related to the small sizes of Wyoming's hospitals is the ***quality*** of the medical training available to medical students. In the current health care environment, patients with more complex medical conditions either choose to seek care at larger medical centers in Denver, Salt Lake City, or Billings, or they are referred to those centers by Wyoming physicians. This decreases the likelihood that a UWy SOM student will have exposure to more complex cases. Consequently, the lack of both the depth and breadth of clinical opportunities could have a negative effect on the overall quality of the education provided by the UWy SOM. In turn, this could limit the opportunities that UWy SOM students will have for placements in Residency Programs in various specialty areas, as they might be seen as less competitive.

Alternative to WWAMI or a UWy School of Medicine

Although there have been distinct benefits to Wyoming's affiliation with the WWAMI program, the lack of curricular control and annual increase in costs to the State are significant issues. As an alternative to establishing its own medical school, the University of Wyoming could consider seeking an affiliation with another university medical school. For instance, the School of Medicine at Colorado University-Denver has recently expanded to Colorado State University in Fort Collins. Further, in informal discussions with a CU SOM administrator, an interest was expressed in having the UW join the CU SOM. If this were to become a reality, there would be many benefits, including--

- ***Geographic proximity:*** During years 1 and 2, UW students would have access to medical education opportunities at the CU SOM and along the Front Range while completing their foundational coursework in Laramie.
- ***Maintaining Quality/Quality of Clinical Experiences:*** As Denver is a major U.S. city with numerous medical centers, UW students would have access to the quantity and quality of clinical exposure that they currently have through the University of

Washington. Certainly, the University of Washington is ranked #1 in the area of Primary Care, but opportunities afforded through CU SOM would not be associated with a significant decrease in quality.

- **Emphasis on Rural Health:** An affiliation with CU SOM would benefit the State of Wyoming given that CU is also committed to enhancing rural health medical education and rural health care. A UW-CU partnership could evolve into a national model in rural health medical education and research.
- **Cost:** The following table shows the annual cost of medical education at Schools of Medicine in the region. This represents the appropriation that is currently provided by (or could be provided by) the State of Wyoming:

Program	General: Years 2-4
WWAMI	6,103,855
Colorado	3,909,340
Utah	4,679,460
South Dakota	4,723,069

Assuming the cost associated with CU SOM would not change significantly, it is evident that the cost to provide medical education would be considerably less for the State of Wyoming if it chose to partner with CU SOM. The above costs for Colorado, Utah and South Dakota assume that the costs to partner with these institutions would be equivalent to the out of state tuition rates for these schools.

c) It is the intent of this section to compare current expenditures by the state for post-graduate medical education to anticipated costs of establishing an accredited medical school graduating students with credentials sufficient for licensure under the Wyoming Medical Practice Act, and the provisions of this section shall be construed in light of this intent.

The following table represents the expenditures by the state for medical education (Medical School and Family Medicine Residency) compared to estimated costs for establishing an accredited medical school.

Current Biennial Appropriation	Estimated Biennial Appropriation: UWy SOM	One-Time Expenditures: Facilities
\$ 30,080,676	\$ 75,000,000	\$250,000,000+

Conclusions

Although there may be distinct advantages for the State of Wyoming to have its own school of medicine, there are significant fiscal and logistical challenges that could compromise the quality of the clinical training of its students. The startup costs will be exorbitant, and even with a substantial increase in the financial commitment from the State of Wyoming and the University of Wyoming, the long-term sustainability of a UWy School of Medicine must be considered. An evaluation of the long-term sustainability would be a major consideration of the Liaison Committee on Medical Education (LCME) before granting accreditation of a UWyo School of Medicine.

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